

REMARKS

Claims 1-23 remain pending in this application. Additionally, new claims 24 and 25 have been added and claims 1-5, 12, 13, and 15-19 have been amended. Therefore, claims 1-25 are pending in the present application.

The Examiner rejected claims 1-7, 9, 10, 12-14, 16, 17, 19, 20, 22, and 23 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,878,133 (*Zhou*). Applicants respectfully traverse this rejection.

Claim 1 is directed to adjusting DC feed to a subscriber loop using a line card in which a common analog-to-digital converter is employed to convert voice-band signals and DC signals received from a subscriber line. In particular, claim 1 calls for receiving a signal comprising at least one of a voice component and DC component, receiving a signal from a subscriber line comprising at least one of a voice component and a DC component. Claim 1 further calls for converting the voice component of the signal to a digital voice signal using an analog-to-digital converter to allow further processing of the digital voice signal and converting the DC component of the signal to a digital signal using the analog-to-digital converter employed to convert the voice component of the signal. Claim 1 further calls for adjusting a DC feed to the subscriber line based on the digital signal.

Zhou is directed to a digital direct current feed control for a communication system. Figure 1 of *Zhou* shows that a first A/D converter 52 is used in a first path 23 for DC feed control, and another A/D converter 24 is used in a second path 22 for processing voice signals

from the telephone 16. The signals from the second path 22 are presumably processed by a CODEC or some other device, and then returned via path 34 before being converted by a digital-to-analog converter 62.

In contrast to *Zhou*, claim 1, as noted, is directed to using a common A/D for the voice processing path and DC feed path. For example, as shown in Figure 2 of the patent application, a common A/D 305 is employed for DC feed control and for voice processing before the voice signals are ultimately provided to a CODEC (e.g., element 40 of Figure 1). Because *Zhou* does not teach or disclose using an A/D converter in a common path for DC feed control and voice processing, claim 1 and its dependent claims are allowable. Additionally, for at least the same reason, newly added claims 24-25 are also allowable.

With respect to claim 16, *Zhou* fails to teach one or more of the claimed features. For example, *Zhou* at least does not teach a first path and a second path, wherein the first path determines a cancellation current proportional to a current flowing from the subscriber line and the second path adjusts a DC level control based on the determined cancellation current. As shown in Figure 1 of *Zhou*, the SLIC 14 interacts with a single feedback loop that includes the digital control circuit 50 through the interface 23. Accordingly, claim 16 and its dependent claims are allowable.

Independent claims 5, 9, 12, 20, and 23, among other things, call for synthesizing a curve in the current limit region and adjusting the DC feed based on the synthesized curve. Figure 3 of the patent application shows a traditional DC feed curve employed by conventional line cards for DC feed control. The system described in *Zhou* also uses this type of DC feed curve, as shown in Figure 2 of *Zhou*. For reasons more fully described in the patent application, one or more

embodiments of the present invention adjust DC feed to the subscriber line based on a curve synthesized (e.g., artificial curve) in the current limit region, as shown by line 405 in Figure 4 of the instant application. This "synthesized" curve is calculated, in one embodiment, using the method described in Figure 6 of the present application. As can be seen in Figure 2 of **Zhou**, there is no synthesization of a curve in the current limit region; instead, the curve 111 is used to define the upper limit of the loop during operation. Accordingly, for at least this reason, independent claims 1, 5, 9, 12, 20, and 23, and the respective claims depending from them, are allowable.

In light of the arguments presented above, Applicants respectfully assert that claims 1-25 are allowable. Accordingly, a Notice of Allowance is respectfully solicited.

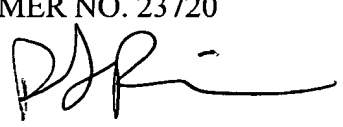
If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Houston, Texas telephone number (713) 934-4069 to discuss the steps necessary for placing the application in condition for allowance.

Respectfully submitted,

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